Research Methods in Radiology provides concise, practical insights on how to design clinical and experimental studies in diagnostic imaging.

This unique resource encompasses contributions from leaders in academic radiology as well as top epidemiologists, biostatisticians, and librarians with vast multidisciplinary and radiology research experience. The material reflects years of expertise teaching core biostatistics in radiology principles to residents, fellows, radiologists, and epidemiologists. Given the vast amount of published information on research methodology and statistics in radiology, the authors’ goal was to write a high-yield review and study tool rather than a comprehensive book. Key topics are succinctly addressed in each chapter, including measurements in radiology; decision analysis in radiology; and systemic reviews, evidence-based imaging, and knowledge translation.

Key Highlights
Introductory chapters on analysis of diagnostic tests, linear and logistic regression, meta-analysis, statistical inference, and economic evaluation provide easy-to-follow tutorials. Each chapter includes learning objectives, basic concepts, supplementary tables, and ancillary online material. Case studies with images, graphs, and tables highlight primary “take home” points. Sample size calculations are illustrated for a wide range of research questions. Code is included for use in R, free open-source software for statistical analysis. This book is an indispensable review of research methodology for radiology students and residents. Practicing clinicians will also benefit from this precisely focused reference tool on clinical and experimental research.